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TENTH MONTHLY REPORT ON IMAGE ENHANCEMENT (U)

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Task Order No. 18

14 July 1967

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In the past month several sets of correction filters have been constructed to remove two dimensional linear motion but at this time results are inconclusive. We have been using a new evaluation technique since a valid simulation of a two dimensional smear is very difficult to generate. However, if the original aberrated impulse response is used as a target, the filter that was made with it should be a matched filter for that particular shape, i.e., a successful filter will produce a delta function response when matched to the smeared impulse response. Although this technique is very sensitive, the total illumination is so low that a visual evaluation procedure is quite slow and weak responses from marginal filters are not always detectable.

Once again we have found it necessary to refine the exposure parameters used in the filter construction since in the two dimensional case, small exposure changes have totally changed the filter characteristics. Our best evidence indicates that for each particular smeared impulse response a unique set of exposures must be found experimentally to obtain a satisfactory filter.

Most of the coming month will be used to generate optimum filters and examples of filtered imagery for the final report.

As of 1 July 1967, 83% of the contract time has been completed and 74% of the funding has been expended. It is estimated that approximately 80% of the work is completed.